APPENDIX B:
PENDING CLAIMS AS OF OFFICE ACTION DATED 11/16/01

1. A method of reducing the growth rate of a tumor, comprising contacting a cell within said tumor with (a) a DNA segment encoding a functional p53 protein and (b) a DNA damaging agent in a combined amount effective to inhibit the growth of said tumor, wherein function p54 protein is expressed in the cell.

2. The method of claim 1, wherein the DNA damaging agent is X-ray radiation, UV-irradiation, γ-irradiation, microwaves, adriamycin, 5-fluorouracil, etoposide, camptothecin, actinomycin-D, mitomycin C, or cisplatin.

3. The method of claim 2, wherein said cell is contacted with the DNA segment in combination with cisplatin.

4. The method of claim 1, wherein the DNA segment is in a recombinant vector that expresses the functional p53 protein in said cell.

5. The method of claim 4, wherein said p53-expressing recombinant vector is a naked DNA plasmid, a plasmid within a liposome, a retroviral vector, an AAV vector, or a recombinant adenoviral vector.

6. The method of claim 5, wherein said p53-expressing recombinant vector is a recombinant adenoviral vector.

7. The method of claim 4, wherein said p53-expressing recombinant vector comprises a p53 expression region positioned under the control of a constitutive promoter.

8. The method of claim 4, wherein said recombinant vector comprises a p53 expression region, a cytomegalovirus IE promoter and an SV40 early polyadenylation signal.

9. The method of claim 6, wherein at least one gene essential for adenovirus replication is deleted from said adenovirus vector and a p53 expression region is introduced in its place.

10. The method of claim 9, wherein E1A and E1B regions of the adenovirus vector are deleted and the p53 expression region is introduced in their place.

12. The method of claim 1, wherein said cell is first contacted with the DNA segment and is subsequently contacted with said DNA damaging agent.

13. The method of claim 1, wherein said cell is first contacted with said DNA damaging agent and is subsequently contacted with the DNA segment.

14. The method of claim 1, wherein said cell is simultaneously contacted with the DNA segment and said DNA damaging agent.

15. The method of claim 1, wherein said cell is contacted with a first composition comprising the DNA segment and a second composition comprising said DNA damaging agent.

16. The method of claim 15, wherein said first or second composition is dispersed in a pharmacologically acceptable formulation.

17. The method of claim 1, wherein said cell is contacted with a single composition comprising the DNA segment in combination with said DNA damaging agent.

18. The method of claim 17, wherein said composition is dispersed in a pharmacologically acceptable formulation.

19. The method of claim 17, wherein said cell is contacted with a single composition comprising a recombinant vector that expresses p53 in said cell in combination with said DNA damaging agent.

20. The method of claim 19, wherein said cell is contacted with a single composition comprising a recombinant adenovirus containing a recombinant vector that expresses p53 in said cell in combination with said DNA damaging agent.

21. (Canceled)

22. The method of claim 1, wherein said cell is a malignant cell.

23. The method of claim 22, wherein said malignant cell is a lung cancer cell.

24. The method of claim 22, wherein said malignant cell is a breast cancer cell.

25. The method of claim 22, wherein said malignant cell has a mutation in a p53 gene.

26. The method of claim 1, wherein said cell is located within an animal at a tumor site.

32. A composition comprising a) an exogenous DNA segment encoding a functional p53 polypeptide and b) a DNA damaging agent.

33. The composition of claim 32, wherein the DNA damaging agent is adriamycin, 5-fluorouracil, etoposide, camptothecin, actinomycin-D, mitomycin C, or cisplatin.

34. The composition of claim 33, wherein the DNA damaging agent is cisplatin.

35. The composition of claim 32, wherein the exogenous DNA segment is in a recombinant vector that expresses a functional p53 protein in an animal cell.

36. The composition of claim 35, wherein said recombinant vector is a naked DNA plasmid or a plasmid within a liposome.

37. The composition of claim 36, wherein said recombinant vector is a recombinant adenoviral vector.

39. The composition of claim 37, wherein the recombinant vector is a recombinant adenoviral vector and the DNA damaging agent is cisplatin.

40. The composition of claim 32, dispersed in a pharmacologically acceptable formulation.

41. The composition of claim 40, formulated for intralesional administration.

42. A therapeutic kit comprising, in suitable container means, a pharmaceutical formulation of a recombinant vector that expresses a functional p53 protein in an animal cell and a pharmaceutical formulation of a DNA damaging agent.

43. The kit of claim 42, wherein said recombinant vector and said DNA damaging agent are present within a single container means.

44. The kit of claim 42, wherein said recombinant vector and said DNA damaging agent are present within distinct container means.

45. The kit of claim 42, wherein the recombinant vector is an adenovirus vector and the DNA damaging agent is cisplatin.

46. The method of claim 1, wherein the cell is contacted with a DNA damaging agent by irradiating the cell with X-ray radiation, UV-irradiation, γ-irradiation or microwaves.

47. The method of claim 46, wherein the cell is contacted with a DNA damaging agent by irradiating the cell with X-ray radiation.

48. The method of claim 46, wherein the cell is contacted with a DNA damaging agent by irradiating the cell with UV-irradiation.

49. The method of claim 46, wherein the cell is contacted with a DNA damaging agent by irradiating the cell with γ-irradiation.

50. The method of claim 46, wherein the cell is contacted with a DNA damaging agent by irradiating the cell with microwaves.

51. The method claim 1, wherein the cell is contacted with a pharmaceutical composition comprising the DNA damaging agent.

52. The method of claim 51, wherein the DNA damaging agent is cisplatin.

53. The method of claim 51, wherein the DNA damaging agent is doxorubicin.

54. The method of claim 51, wherein the DNA damaging agent is etoposide.

55. The method of claim 51, wherein the DNA damaging agent is verapamil.

56. The method of claim 51, wherein the DNA damaging agent is podophyllotoxin.

57. The method of claim 51, wherein the DNA damaging agent is 5-FU.

58. The method of claim 51, wherein the DNA damaging agent is actinomycin-D.

59. The method of claim 51, wherein the DNA damaging agent is adriamycin.

60. The method of claim 51, wherein the DNA damaging agent is camptothecin.

61. The method of claim 51, wherein the DNA damaging agent is mitomycin C.

77. The method of claim 4, wherein said DNA segment is administered prior to said DNA damaging agent.

78. The method of claim 4, wherein said DNA segment is administered after said DNA damaging agent.

79. The method of claim 4, wherein said DNA segment is administered at the same time as said DNA damaging agent.

83. The method of claim 26, wherein said DNA segment is delivered to said tumor endoscopically, intravenously, intratracheally, intralesionally, percutaneously or subcutaneously.

84. The method of claim 26, wherein said tumor site is a resected tumor bed.

85. The method of claim 26, wherein said administration is repeated.

86. The method of claim 13, wherein there is 12 to 24 hours between administration of the DNA damaging agent and administration of the DNA segment.

87. The method of claim 13, wherein there is 6 to 12 hours between administration of the DNA damaging agent and administration of the DNA segment.

88. The method of claim 13, wherein there is about 12 hours between administration of the DNA damaging agent and administration of the DNA segment.

89. The method of claim 12, wherein there is 12 to 24 hours between administration of the DNA segment and administration of the DNA damaging agent.

90. The method of claim 12, wherein there is 6 to 12 hours between administration of the DNA segment and administration of the DNA damaging agent.

91. The method of claim 12, wherein there is about 12 hours between administration of the DNA segment and administration of the DNA damaging agent.

96. The method of claim 1, wherein said tumor cell is an epithelial tumor cell.

97. The method of claim 23, wherein said lung cancer cell is non-small cell lung carcinoma cell.

98. The method of claim 97, wherein said non-small cell lung carcinoma cell is a squamous carcinoma cell.

99. The method of claim 97, wherein said non-small cell lung carcinoma cell is an adenocarcinoma cell.

100. The method of claim 97, wherein said non-small cell lung carcinoma cell is a large-cell undifferentiated carcinoma cell.

101. The method of claim 23, wherein said lung cancer cell is a small cell lung carcinoma cell.

111. The method of claim 26, wherein said gene is administered in about 0.1 ml.

112. The method of claim 26, wherein said gene is administered in about 10 ml.

115. The method of claim 52, wherein said cisplatin is administered at 20 mg/m^2.

116. The method of claim 53, wherein said doxorubicin is administered at 25-75 mg/m^2.

117. The method of claim 54, wherein said etoposide is administered at 35-50 mg/m^2.

118. The method of claim 57, wherein said 5-FU is administered at 3-15 mg/kg.

119. The method of claim 47, wherein the cell is irradiated with about 2000 to 6000 roentgens.

120. The method of claim 47, wherein the cell is irradiated with about 50 to 200 roentgens.

128. The method of claim 7, wherein the promoter is selected from the group consisting of SV40, CMV and RSV.

129. The method of claim 128, wherein the promoter is the CMV IE promoter.

130. The method of claim 129, wherein the vector further comprises a polyadenylation signal.